Microsoft Exchange Server

Chapter 5
Upgrading Exchange 5.5 Servers to Exchange 2000

Deployment Guide

Abstract

This chapter outlines the steps to upgrade an Exchange 5.5 Service Pack 3 mailbox server. After completing these steps, you will have upgraded one of your mailbox servers to Exchange 2000 or moved the mailboxes from some of your existing Exchange servers to an Exchange 2000 server.

This is a preview edition of the Microsoft Exchange 2000 Server Upgrade Series. The final documentation will be available in November 2000.

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CONTENTS

INTRODUCTION....1
Design Considerations 1
Chapter Sections 1
Resource Requirements 1
Security and Account Privileges 1
Skills 2
System Prerequisites 2

PROCESS FLOWCHART....3

PREPARING FOR POSSIBLE UPGRADE ISSUES....4
What You Will Need 4
What You Should Know 4
Preliminary Steps 4
Running the MTACheck Utility 5
Running the KCC 5
Resynchronizing the Databases 5
Creating the Backup 5

UPGRADING FROM EXCHANGE 5.5 SP3 TO EXCHANGE 2000....6
What You Will Need 6
What You Should Know 6
Upgrading an Exchange 5.5 SP3 Mailbox Server 6
Related Topics 8

POST-UPGRADE PROCEDURES....10
What You Will Need 10

RECOVERING AFTER A FAILED EXCHANGE 2000 UPGRADE....11

SUMMARY....12
More Information 12

Preview Documentation

INTRODUCTION

In the last chapter, you reviewed what you should do if you are just installing Exchange 2000 on a vanilla Windows 2000 server. But what if you already have Exchange 5.5 servers and you want to upgrade them to Exchange 2000? This chapter will walk you through the steps you should perform to complete a successful upgrade of an Exchange 5.5 Service Pack 3 server to Exchange 2000.

This chapter also includes the steps necessary to ensure that you can roll back from a failed upgrade, along with a link to further information on how you can carry out this procedure. However, if you use an account with the proper permissions, you should not have to recover a server in this manner.

Design Considerations

Upgrading an Exchange 5.5 server to Exchange 2000 is one of the possible routes you can take when upgrading your Exchange 5.5 sites to Exchange 2000. Once upgraded, this system can be used just as it is, or you can add connectors, public folders, or mailboxes from existing downlevel Exchange systems.

Before you attempt to upgrade an Exchange 2000 server, the Active Directory should be prepared and the Exchange Full Administrator account should be defined. For more information on preparing the Active Directory for Exchange 2000, see Chapter 2, “Configuring Active Directory for Exchange 2000.”

Chapter Sections

This chapter contains the following sections:

- Preparing for possible upgrade issues
- Upgrading from Exchange 5.5 to Exchange 2000
- Post-Upgrade Procedures

Resource Requirements

Be sure you have the resources outlined below before you upgrade an Exchange 5.5 server to Exchange 2000.

Security and Account Privileges

You will need to use an account with all of the following permissions to upgrade an Exchange 5.5 server to Exchange 2000:

- Exchange 2000 Full Administrator permissions either at the Exchange 2000 organizational or administrative group level

- Exchange Permissions Administrator rights on the site that your Exchange 5.5 server is in
- Local Administrator rights on the server

Skills

If you are performing this upgrade, you should have experience administering Exchange 5.5. If you don't have these skills, review the following "Microsoft Exchange Server 5.5 Series - Accelerated Training for Administration and Implementation" available from*:*

http://www.microsoft.com/trainingandservices/syllabi/syllasearch.asp?PageURL=/TrainingAndServices/content/syllabi/1313afinal.txt

Experience administrating Exchange 2000 is an added plus. However, considering the purpose of this guide, this isn't a requirement.

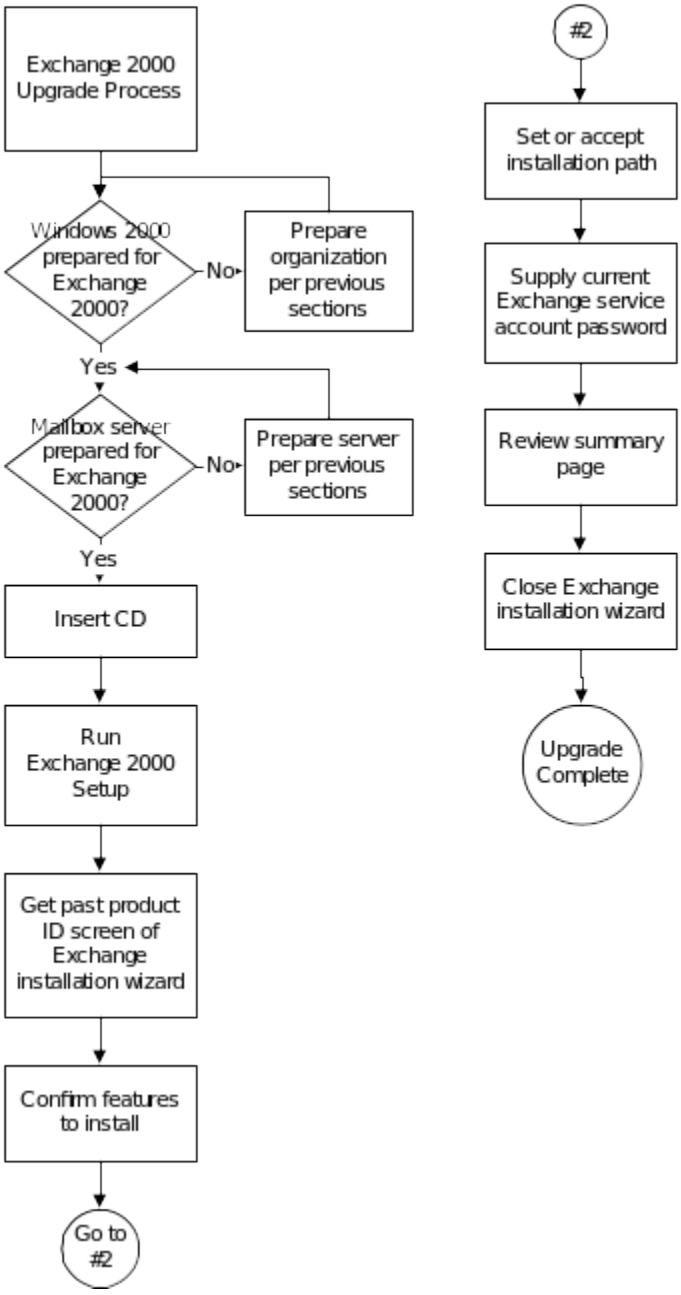
System Prerequisites

To upgrade to Exchange 2000, you will need a Windows 2000 server that is a server in an existing Windows 2000 organization. This server can be either a member server in a domain, or a domain controller. This server will also need SP1 and specific hotfixes. For more information about these hotfixes, see the following article in the Microsoft Knowledge Base "Q271976: Hotfix Rollup Package Corrects Problems Described in Q257357 and Q271907" available from:

http://support.microsoft.com/support/kb/articles/Q271/9/76.ASP?LN=EN-US&SD=gn&FR=0

You will also need to have your Windows 2000 forest and domain prepared for Exchange 2000 as explained in Chapter 2, "Configuring Active Directory for Exchange 2000."

PREPARING FOR POSSIBLE UPGRADE ISSUES



This section describes the actions you need to perform before upgrading your Exchange 5.5 server to Exchange 2000. Taking these steps will help to reduce the risk associated with the upgrade procedure and will mean that should you experience problems, you will be able to reconstruct your Exchange server as it was before you started the installation.

By this point, you should have prepared your Windows 2000 Active Directory and your current Exchange organization for Exchange 2000 as described in Chapter 2, “Configuring Active Directory for Exchange

2000.” You will also have installed and updated Windows 2000 Server (or upgraded from Windows NT 4.0, then updated) on the computer where you will be installing Exchange 2000.

What You Will Need

To complete this procedure, you will need the following items:

- Downlevel Exchange backup software
- Documented downlevel Exchange 5.5 backup procedure
- Documented Windows 2000 backup procedure

What You Should Know

Before you proceed, you should know the following:

- The account name and password that has permissions to backup the server that will be upgraded.
- The account name and password that has administrator rights to the site that hosts the Exchange 5.5 server.
- The account name and password that has Exchange administrator rights to the servers in the Exchange organization.

Preliminary Steps

To prepare for the upgrade, you need to make a full backup of the Exchange system. To do this, complete the following steps (complete procedures are included later in the section):

1. Run the MTACheck utility
2. Run the Exchange Knowledge Consistency Checker.
3. Resynchronize the databases
4. Back up the Exchange 5.5 Directory Service and Information Store and the rest of the system.

Once you’ve completed this preliminary work, you are ready to start the Exchange 2000 upgrade.

Running the MTACheck Utility

Stop the **Microsoft Exchange Message Transfer Agent** service on the server, then run MTACheck from the \exchsrvr\bin directory on that server. The syntax for this tool is:

```
MTACheck /v.
```

If you encounter any issues when you run this utility, resolve the issues and then run the utility again.

UPGRADING FROM EXCHANGE 5.5 SP3 TO EXCHANGE 2000

Running the KCC

Run the Exchange Knowledge Consistency Checker (KCC) on the same server. To run the KCC, perform the following steps:

1. Open the Exchange Server Administrator program, and connect to the server.
2. Click to expand the Organization container, click to expand the Site container, click to expand the Configuration container, and then click the Directory Replication object.
3. In the right pane, click the directory replication connector that you want to move to a different server, and then open the properties of the directory replication connector.
4. On the General tab, click the new server name in the Local bridgehead server list, click **Apply**, and then click **Yes**.

Resynchronizing the Databases

Perform a Directory Service/Information Store (DS/IS) Consistency adjustment to resynchronize the two databases. Follow these steps:

1. Select the Server Object (Organization, Site, Configuration, Servers, *<servername>*), click **File**, **Properties** (Alt+Enter), and click the **Advanced** tab.
2. Click **Consistency Adjuster**.
3. On the **DS/IS Consistency Adjustment** screen, click **All inconsistencies**, and click **OK**.
4. On the warning page, click **OK**.
5. When the adjustment has completed, click **OK** to close the dialog box and property sheet.

Creating the Backup

Create the system backup as follows:

1. Make an online backup of the Exchange 5.5 Directory Service and Information Store.
2. Create a Windows 2000-level backup of the rest of the system. Include the registry and system state information in this backup. This will give you a rollback position in case you need to fully recover the server to the point before you started the installation.

With your preparation phase completed, you can now upgrade your first Exchange 5.5 SP3 server. As stated in the System Prerequisites section of this chapter, you must be running Exchange 5.5 SP3 to perform this

upgrade as there is no direct upgrade path from any other version of Exchange. For more information on upgrading to Exchange 5.5, see the links at the end of this section.

What You Will Need

Make sure you have the following items before you start this procedure:

- Exchange 5.5 Service Pack 3 (SP3) server running on Windows 2000 SP1 system (Server or Advanced Server).
- Exchange 2000 installation CD or access to Exchange 2000 installation files from a network location.

What You Should Know

You should find out the following before beginning the upgrade process:

- Exchange 5.5 Service Account name and password.
- Exchange 2000 Full Administrator account name and password or name and password of an account that has been delegated Exchange 2000 Full Administrator rights and local administrator rights on the server being upgraded.

Upgrading an Exchange 5.5 SP3 Mailbox Server

To upgrade the server, complete the following steps:

1. Insert the Exchange 2000 CD into the server you wish to upgrade. Close the autorun window, and open a command prompt.
2. From the command prompt, type

   F:\SETUP\I386\SETUP

   where *F* is your CD-ROM drive.
3. On the first page of the Exchange 2000 Installation Wizard, click **Next**. On the second page, click **I agree**, and then click **Next**; and on the third page, type the product ID number from your Exchange 2000 Server CD, then click **Next**.
4. On the **Component Selection** page, **Upgrade** is the only available option. If a feature was installed on the Exchange 5.5 server, you can upgrade that component. However, you cannot change the status of these items, nor can you add items to the list. Click **Next** to continue.

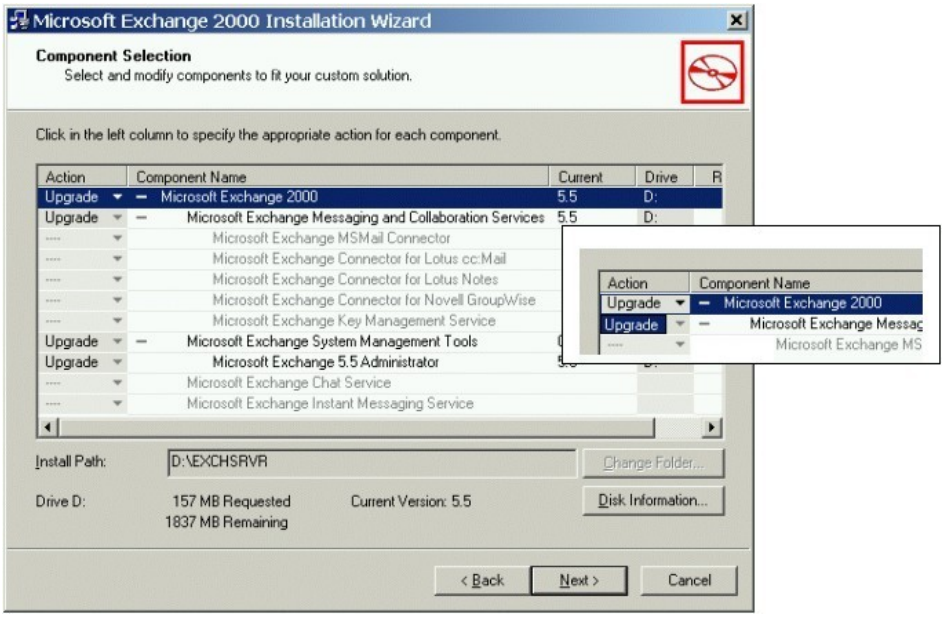


Figure 1. Server Upgrade Component Selection Detail

5. On the **Service Account** page, enter the Exchange 5.5 Service Account password and click **Next**.

6. On the **Component Summary** page, review the selected components and click Next to start the upgrade process.

   You will see the bars moving on the **Component Progress** page. There are three phases during the upgrade.

   Note: During each of these upgrade phases, the installation routine performs several functions on the items being upgraded. If you want detailed information about what happens in each step, you can open the “Exchange Server Setup Progress.log” log file in the root of the system drive after the upgrade completes.

   The Post-Installation process upgrades the directory schema of the Exchange 5.5 databases to Exchange 2000 format.

7. When the upgrade process completes, you will be at the Installation Complete screen. Press the **Finish** button to close the wizard.

   The upgrade does not all happen at once. During the manual portion of the upgrade process, the database schema is modified and files are copied to the server. When this part completes, the server becomes operational.

   The database entries are actually upgraded as part of a background process that happens after the manual process completes. On a mailbox server, this background process only upgrades the primary Outlook folders, which includes the Inbox, Outbox, Calendar, Sent Items, and Contacts folders. This process allows the Exchange 2000

upgrade process to complete in a very short period of time.

However, if all your users access their mailboxes shortly after the manual part of the upgrade, the background store process attempts to upgrade their mailboxes (at least the folders that the users are accessing) in an on-demand fashion. This can cause your newly upgraded Exchange 2000 server to slow down considerably. Therefore, you should upgrade your server when only a very small number of users would access it immediately after the upgrade completes, for example, early in the weekend. This will allow the background process to upgrade the folders before the majority of users try to access the server.

Due to the client access issue described above, you should include a detailed schedule of when you will actually be performing your server upgrades as part of your Exchange 2000 migration plan.

After you have completed the upgrade steps, if this is the first server you have upgraded or a server that hosted Exchange 5.5 site directory replication connectors, open the ADC MMC snap-in and look at the new connection agreement (CA) that has been created in the ADC. Figure 2 shows the new configuration CA.

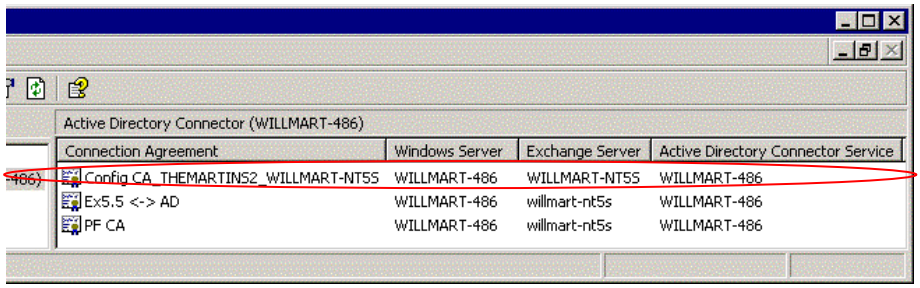


Figure 2. ADC Showing the Configuration CA Between Exchange 2000 SRS and Windows 2000 Active Directory

This configuration CA (ConfigCA) is the connection agreement that replicates the Exchange 5.5 configuration information into Active Directory through the Exchange 2000 Site Replication Service (SRS), and the Exchange 2000 configuration information from Active Directory into the Exchange 5.5 directory in the opposite direction. The Exchange 5.5 endpoint (for example, the server that is configured as the server from which the Exchange 5.5 directory is replicated) for the ConfigCA is the SRS on the server on which you just completed the upgrade.

The SRS exists only on the first server added to a site, the first server upgraded in a site, or on any upgraded directory replication server. For more information on the SRS, see the following document:

http://www.microsoft.com/Exchange/techinfo/Coexandup.htm

POST-UPGRADE PROCEDURES

Related Topics

The following documents and downloads provide more information on the procedures described in this section.

Guide to Upgrading from Exchange Server 5.5 to Exchange 2000 Server: http://www.microsoft.com/exchange/productinfo/E2KGuide.htm

For information on upgrading earlier versions of Exchange to Exchange Server 5.5, see the following link:

http://www.microsoft.com/TechNet/exchange/technote/upgrade.asp.

Exchange 5.5 service pack 3 is available at:

http://www.microsoft.com/exchange/downloads/sp3.htm

Assuming you have made it this far, you can move on to the post-upgrade procedures. This section deals with the actions you need to perform after a successful upgrade to Exchange 2000. The steps in this section take you through the procedure for creating a full system backup that will allow you to recover your server to the state it was in immediately following the upgrade should any disaster strike in the future.

The post-upgrade procedures consist of the following:

1. Make a full Exchange 2000 backup of the system.
2. Follow this with a backup of the Windows 2000 system. This should exclude the Exchange databases but should include registry and system state information.
3. Store the backup media in a safe location along with a printout of the backup status log.

This procedure will give you a rollback position in case you need to fully recover the server to the point before you started the backup. Once you have a full backup of the system, you have completed the Exchange 2000 upgrade.

What You Will Need

To complete this procedure, you need the following items:

- Preferred Exchange 2000 server backup software
- Preferred Windows 2000 server backup software
- Documented Exchange 2000 backup procedure
- Documented Windows 2000 backup procedure

RECOVERING AFTER A FAILED EXCHANGE 2000 UPGRADE

- The account name and password that has permissions to backup the upgraded server.

OK, so the worst has happened. Your Exchange 2000 server has caught an advanced case of Monday morning disease and is glowering at you in mute protest, arms metaphorically folded and with a look of grim implacability across its screen. The upgrade progress screen looks more like the results of that terrible spelling test you did in sixth grade that you still remember with embarrassment today, the one with red crosses against every item. And to cap it all, even Task Manager has stopped responding.

If you find yourself in this situation, there's good news and bad news. The good news is that the solution to this little problem is well documented. The bad news is that you do have some work to do.

For information on how to roll back after a failed upgrade, see the following article in the Microsoft Knowledge Base:

Q264309 - XADM: How to Roll Back a Failed Upgrade from Exchange Server 5.5 to Exchange 2000

http://support.microsoft.com/support/kb/articles/Q264/3/09.ASP

In this chapter, you learned how to upgrade an existing Exchange 5.5 server to Exchange 2000. You were shown how to limit your risk by backing up your system before the upgrade, and backing it up again after the upgrade completed.

This may be the end of your upgrade path on this server. However, if you plan on migrating other resources (mailboxes, public folders, or connectors) to this machine, these processes are detailed in later chapters of this guide. For information on migrating mailboxes and folders, see Chapter 6, "Moving Mailboxes and Public Folders." To move connectors and transports onto Exchange 2000, see Chapter 7, "Migrating Transports, Connectors and Hubs." For all other messaging components, see Chapter 9, "Upgrading Other Messaging Components."

More Information

If you want another resource to assist you in the process of upgrading from Exchange 5.5 to Exchange 2000, then follow the link to the document below:

Preview Documentation

Guide to Upgrading from Exchange Server 5.5 to Exchange 2000 Server

http://www.microsoft.com/exchange/productinfo/E2KGuide.htm